WHAT IS CLAIMED IS:

1. A micro electromechanical switchable capacitor comprising :

a bottom electrode;

a dielectric layer deposited on at least a portion of said bottom electrode;

a conductive floating electrode deposited on at least a portion of said dielectric layer;

an armature positioned to form a first overlap region with said floating electrode, said first overlap region comprising the projection of the armature onto the floating electrode along a direction substantially perpendicular to the plane of the bottom electrode;

a first actuation area comprising at least a portion of a second overlap region between said armature and an uncovered portion of said bottom electrode, wherein said second overlap region comprises a projection of said armature onto said bottom electrode along a direction substantially perpendicular to the plane of the bottom electrode.

2. A capacitor according to claim 1, further comprising at least one actuation electrode and a second actuation area, wherein said second actuation area comprises an overlap area between said armature and said at least one actuation electrode, and said overlap area comprises a projection of said armature onto said bottom electrode in a direction substantially perpendicular to the plane of the bottom electrode.

3. A capacitor according to claim 1, wherein at least one of a width and length of said first overlap region between said floating electrode and said armature is at most 5 μm.

4. A capacitor according to claim 1, wherein said armature comprises first and second sides opposite to each other and located in a plane substantially perpendicular to the plane of the bottom electrode, and wherein said armature is located such that a first portion of the floating electrode is positioned at the first side of the armature and a second portion of the floating electrode is positioned at the second side of the armature.

5. A capacitor according to claim 1, wherein said armature comprises one of a bridge and a cantilever.

6. A capacitor according to claim 1, further comprising an up state actuation area and a down state actuation area.

7. A capacitor according to claim 6, wherein said up state actuation area comprises at least one of (a) the second overlap region between said armature and said bottom electrode, and (b) the second actuation area.

8. A capacitor according to claim 6, wherein said down state actuation area comprises one of (a) the first actuation area, and (b) the second actuation area.

9. A capacitor according to claim 1, wherein the capacitor is characterized by an up state capacitance that is a function of the second overlap region between said armature and said bottom electrode.

10. A capacitor according to claim 9, wherein said up state capacitance is proportional to the second overlap region between said armature and said bottom electrode.

11. A capacitor according to claim 1, wherein said up state capacitance is made smaller than 10 centifarad by reducing the second overlap region between the armature and the bottom electrode.

12. A capacitor according to claim 1, wherein the capacitor is characterized by a down state capacitance that is a function of an overlap area between said floating electrode and said bottom electrode, said overlap area comprising a projection of the floating electrode onto the bottom electrode in a direction substantially perpendicular to the plane of the bottom electrode.

13. A capacitor according to claim 12, wherein said down state capacitance is proportional to the overlap area between said floating electrode and said bottom electrode.

14. A capacitor according to claim 1, wherein said floating electrode comprises unconnected regions.

15. A capacitor according to claim 14, wherein each of said unconnected regions comprises an overlap with said armature, said overlap comprising a projection of the

armature onto the unconnected region along a direction substantially perpendicular to the plane of the bottom electrode.

16. A capacitor according to claim 1, wherein at least one island of conductive material is deposited onto said dielectric layer, and wherein said at least one island comprises a contact region between said armature and said dielectric layer.

17. A capacitor according to claim 1, wherein the armature comprises an up and a down surface positioned opposite to each other in a plane substantially parallel to the plane of the bottom electrode, said down surface of said armature comprising at least one elevated island of conductive material, and wherein said elevated island comprises a contact region between said armature and dielectric layer.

18. A capacitor according to claim 1, wherein said floating electrode is embedded or encapsulated within said dielectric layer.

19. A capacitor according to claim 1, wherein at least one of said dielectric layer, said floating gate, and said armature comprises a plurality of holes.

20. A method of processing a micro electromechanical switchable capacitor, the method comprising:

depositing a stack comprising a first conductive layer, a second conductive layer and a first dielectric layer between said first and said second conductive layers;

etching said second conductive layer and said first dielectric layer with a first mask to define a region of the first conductive layer that is protected by the first mask;

etching said second conductive layer with a second mask to form a floating electrode and a first actuation area;

etching said first conductive layer with a third mask to form a bottom electrode and a plurality of ground lines; and

depositing and etching a third conductive layer to form an armature.